# GOVERNMENT OF INDIA
# SCIENCE AND TECHNOLOGY
# LOK SABHA

UNSTARRED QUESTION NO:4375
ANSWERED ON:29.03.2017
Efficacy of Yoga
Arunmozhithevan Shri A.

**Will the Minister of SCIENCE AND TECHNOLOGY be pleased to state:**

(a) whether the Government has funded a wide range of research institutions to study the efficacy of yoga and to ascertain whether it has a role in alleviating stroke, type 2 Diabetes, Parkinson's and Schizophrenia;

(b) if so, the details thereof; and

(c) whether the Government had advertised for research proposals and the department has got over 700 which it shortlisted to 16 for the first year and if so, the details in this regard?

## Answer

MINISTER OF STATE IN THE MINISTRY OF SCIENCE AND TECHNOLOGY AND MINISTER OF STATE IN THE MINISTRY OF EARTH SCIENCES
(SHRI.Y. S. CHOWDARY)

(a) & (b): Yes, Madam. Department of Science & Technology (DST) has launched a new programme 'Science and Technology of Yoga and Meditation (SATYAM)' during 2015-16. A wide range of institutions have been extended budgetary support under SATYAM to study the efficacy of yoga and meditation. It is also the endeavour of DST to validate various expected benefits of Yoga and Meditation including their role in studying efficacy in treating stroke, type 2 Diabetes, Parkinson's and Schizophrenia besides alleviating lifestyle diseases. Following projects have specifically been supported in 2015-16:

Sl.No. Project Title Name of Institute
1. Elucidating the science of yoga as a therapeutic intervention in post stroke recovery: study of brain using the technique of magnetic resonance. All India Institute of Medical Sciences (AIIMS), New Delhi
2. Effect of yoga on physiological, inflammatory and oxidative stress marks among type 2 diabetes subjects. MV Hospital for Diabetes and Diabetes Resarch Centre, Chennai
3. Effects of yoga on motor cortex plasticity, motor learning and motor deficits of Parkinson"s disease. Shri Chitra Tirunal Institute of Medical Sciences and Technology, Thiruvananthpuram
4. Examination of therapeutic efficacy and potential mechanisms of yoga treatment in schizophrenia. National Institute of Mental Health and Neuro Sciences (NIMHANS), Bangalore
5. Yoga and meditation as cognitive enhancement therapy for persons with schizophrenia: A randomized controlled trial. Dr. Ram Manohar Lohiya Hospital, New Delhi

(c) Yes Madam. During the year 2015-16, Department of Science & Technology (DST) advertised the 1st Call for Proposals under SATYAM and received about 580 proposals out of which 22 research projects have been extended budgetary support. The list of such projects funded by DST is placed at Aneexure-1.

ANNEXURE-I

S.N. Project Title , Institute and Total Project Cost
1. Pranayama and voice related quality of life among teachers.
Institute: Kasturba Medical College,Mangalore.
Total Project Cost: Rs.42.03 lakh
2. Effect of yoga and medititation on hippocampal volumetry and memory among people with chronic drug resistant mesial temporal lobe epilepsy: A comparative study before and after epilespy surgery.
Institute: National Insititute of Mental Health and Neuro Sciences, Bengaluru
Total Project Cost: Rs.37.97 lakh
3. Meditation, sleep organaization and well-being from an Indian perspective: Evaluation of micro sleep architecture dynamics, sleep consciousness and psychological well-being in practitioners of vipasana meditation.
Institute: National Insititute of Mental Health and Neuro Sciences (NIMHANS), Bangalore
Total Project Cost: Rs.37.27 lakh
4. Effects of yoga on motor cortex plasticity, motor learning and motor deficits of Parkinson"s disease.
Institute: Sree Chitra Tirunal Institute for Medical Sciences and Technology,
Thiruvananthapuram.

Total Project Cost: Rs.32.81 lakh
5. Understanding basic muscle functions while performing various yoga postures.
Institute: Indian Institute of Science, Bangalore.
Total Project Cost: Rs.39.00 lakh
6. Effect of yoga on physiological, inflammatory and oxidative stress marks among type 2 diabetes subjects.
Institute: M.V Hospital for Diabetes & Prof. M Viswanathan Diabetes Research Centre, Chennai.
Total Project Cost: Rs.37.51 lakh
7. Yoga -asana and autonomic neuroscience: Exploring the uniqueness (Acute "state effect", short and intermediate term " training effect", and long-term enduring "trait effect" on cardiac autonomic modulation.
Institute: S K N Medical College, Pune.
Total Project Cost: Rs.26.71 lakh
8. Effects of preoperative pranayama on the post-operative pulmonary functions and pulmonary complications in Patients undergoing neurosurgery.
Institute: Sree Chitra Tirunal Institute for Medical Sciences and Technology, Trivandrum.
Total Project Cost: Rs.8.92 lakh
9. Effect of yoga breathing (Pranayams) on measures of attention and arousal.
Institute: Patanjali Yogpeeth, Haridwar-249405.
Total Project Cost: Rs.19.09 lakh
10. Effectiveness of yoga asanas and pranayama based pulmonary rehabilitation for improving exercise tolerance, pulmonary function and quality of life COPD.
Institute: Health Action by People, Thiruvananthapuram.
Total Project Cost: Rs.20.14 lakh
11. Elucidating the science of yoga as a therapeutic intervention in post stroke recovery: study of brain using the technique of magnetic resonance.
Institute: All India Institute of Medical Sciences, New Delhi.
Total Project Cost: Rs.43.23 lakh
12. Effect of yoga and meditation on meuropsychological functions and brain connectivity networks in mild cognitive impairment (MCI) and cognitively normal subjects.
Institute: Sree Chitra Tirunal Institute for Medical Sciences and Technology,Trivandrum.
Total Project Cost: Rs.33.82 lakh
13. Examination of therapeutic efficacy and potential mechanisms of yoga treatment in schizophrenia.
Institute: National Institute of Mental Health and Neurosciences (NIMHANS), Bangalore.
Total Project Cost: Rs.33.82 lakh
14. Yoga and meditation as cognitive enhancement therapy for persons with schizophrenia: A randomized controlled trial.
Institute: Dr Ram Manohar Lohia Hospital,New Delhi.
Total Project Cost: Rs.32.25 lakh
15. Effect of shakti kriya versus sudarshan kriya and pranayama (SK and P) on electroencephalo-gram (EEG), gene expression, heart rate variability (HRV), galvanic skin resistance (GSR) and quality of life.
Institute: Ved Vignan Maha Vidya Peeth,Bangalore.
Total Project Cost: Rs.11.00 lakh
16. Therapeutic effects of yoga in depression: A neurobiological investigation.
Institute: National Institute of Mental Health and Neurosciences,Bangalore.
Total Project Cost: Rs.46.51 lakh
17. Effect of 30 minutes of yoga and meditation and life style modification in comparison to standard treatment on persons with mild to moderate depressive disorders.
Institute: Mental Health Foundation, New Delhi.
Total Project Cost: Rs.34.57 lakh
18. Effects of yoga on cognitive function and quality of life in breast cancer patients on adjuvant chemotherapy: A randomized controlled trial.
Institute: Health care Global Enterprises Limited (HCG), Bangalore.
Total Project Cost: Rs.50.40 lakh
19. The impact of pranayam and nada yoga in coping with performance anxiety among girls studying music.
Institute: Banasthali Vidyapith, Banasthali.
Total Project Cost: Rs.33.29 lakh
20. Design & development of an embedded assistive yoga system to treat autism spectrum disorder.
Institute: B V Raju Institute of Technology, Medak.
Total Project Cost: Rs.27.18 lakh
21. To study the impact of yoga on immune response, pulmonary functions and quality of life in chest trauma patients at level-I trauma centre.
Institute: JPN Apex Trauma Centre, All India Institute of Medical Sciences,New Delhi.
Total Project Cost: Rs.35.17 lakh
22. Interdisciplinary studies on impact of yoga on cervical and breast cancer patients and survivors.
Institute: University of Mysore, Mysore
Total Project Cost: Rs.50.40 lakh

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